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A Comparison Of The Reported Stress Levels Of Massachusetts Secondary Principals And Their Schools' Scores On The 1999 MCAS

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A COMPARISON OF THE REPORTED STRESS LEVELS OF MASSACHUSETTS SECONDARY PRINCIPALS AND THEIR SCHOOLS' SCORES ON THE 1999 MCAS

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This project is dedicated to public school principals everywhere who work tirelessly for the benefit of all children.

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CHAPTER I

Introduction

The purpose of this study is to examine self-reported stress indices for secondary school principals in Massachusetts in light of the Educational Reform Act of 1993. This Act has significantly changed the role of the principal in the State of Massachusetts. This study will be presented within the framework of stress theory, specifically, occupational stress as measured by a self-reported questionnaire.

Stress Theory

> The Handbook of Stress states, "Stressors are external events or conditions that affect the organism. The description of stressors and their impact on behavior is an open-ended task and current research considers an increasing number of events and conditions to be stressors (Goldberger & Breznitz, 1993, p. 3).

Theories of stress are typically divided into three types: (a) stimulus-oriented stress; (b) response-created stress; and (c) interactional or transactional stress (Lazarus, 1966). Stimulus oriented theories view stress as arising within a stimulus provided by the organism's environment (Cox, 1978; Elliot & Eisdorfer, 1982; Kanner, Coyne, Schaefer & Lazarus, 1981). With this kind of stress, measurements are focused on the characteristics of the person's environment.

Response-created theories of stress believe the stressor is in the response to the individual's stimulus (Selye, 1976). The response is therefore viewed as the cause of the negative situation. Transactional stress, the third kind of stress, describes "a dynamic, cybernetic system in which reciprocal interactions occur between the individual's cognitive, perceptual, and emotional functions, on the one hand, and the characteristics of the external environment on the other" (Derogatis & Coons, 1993, p. 201). Interactional theories, therefore, place primary importance on both the person and the environmental stressor (Lazarus, 1976). "These theorists take a normative approach to defining events and occurrences as stressful; if the event typically leads to psychological distress, behavioral disruption, or deterioration in performance, then it is characterized as a stressor" (Derogatis & Coons, 1993, p. 201).

Occupational Stress

Workers spend many hours at their jobs. It makes sense, then, that the workplace provides many opportunities for stressful situations. The acceptance of this fact may be traced back to the early 1970s and the creation of two government agencies: The Department of Labor created the Occupational Safety and Health Administration (OSHA) and the Department of Health created the National Institute of Occupational Safety and Health (NIOSH). OSHA was concerned with establishing standards of workplace health, and NIOSH was created to "conduct and fund the research necessary to undergird these standards" (Holt, 1993, p. 343). An immediate antecedent to the creation of these agencies was the publication of surveys by the Life Extension Institute of New York City

indicating stress related disease had increased dramatically from 1958 to1972 (Chase, 1972).

The Handbook of Stress states,

> The field of occupational stress then becomes the study of those aspects of work that either have or threaten to have bad effects. The prevalent research paradigm is stress (independent variable) produces undesirable consequences (dependent variable) under certain parametric conditions (moderator variable), which are not always included. (Holt, 1993, p. 344)

In other words, research in occupational stress focuses on the environmental conditions which lead to undesirable psychological or physical conditions and are moderated, at times, by factors such as age, experience, or training.

Measurement of Stress

Derogatis and Coons (1993) trace the use of self-reporting measurement of stress to Golden in 1883 and Woodworth in 1918. Woodworth's Personal Data Sheet was used as a screening instrument for psychiatric disorders in World War I and served as a prototype for subsequent measures of distress. Self-reports have remained the most reliable measures of experienced stress because inter-psychic processes are a key to stress theory. "Although quantifying stress reactions is a goal of researchers, neither biological markers, nor other party ratings or judgments have taken over for basic self-reporting" (Derogatis & Coons, 1993, p. 201).

Measures of Occupational Stress

In the field of occupational stress, it is assumed that the work environment causes cognitive, emotional, and behavioral reactions that may result in health symptoms and disease (Cox, 1978). Arriving at the factors that cause stress has been, as stated above, mainly through self-reported data. This data is assumed to provide an accurate picture of the relationship between the environment and negative outcomes. The causal flow is from the perceptions to outcomes (Spector, Dwyer, & Jex, 1988). In other words, what an individual perceives and reports as negative in the environment is accepted as leading to an undesirable outcome. Spector, Dwyer, and Jex studied the relationship between stress outcomes and job stressors. The individual's self-report was compared to the supervisor's report on the individual's job satisfaction. "The high correlation between the supervisor's and subordinate's report of the subordinate's job satisfaction is evidence for the convergent validity of these reports" (p. 18).

The direct precursor of an instrument created to specifically measure the stress of school leaders was the Index of Job-Related Strain, created in 1963. This instrument was developed to, "discover the degree and form of association between certain demographic characteristics (age, sex, and educational attainment) and the incidence of psychological strain among employed adults" (Indik, Seashore, & Slesinger 1964, p. 26).

In Indik's study, 8000 participants were given three different indices: (a) one concerned with work (JRS); (b) one concerned with economics (ES); and (c) one concerned with psychosomatic symptoms (PS). For work issues, 15 items were listed that could 'bother' adults at work. The correlations of the responses to the 15 items were

higher between the Index and each item than they were between items. Using a split-half method of correlation, the author estimated reliability at .85.

In the late 1970s, Koch, Tung, Gmelch, and Swent (1982), "sought to develop a perceived job related stress scale that would reflect the multidimensionality of stressors within complex administrative positions" (p. 493). They were specifically responding to the fact that measures of self-reported stress thus far had failed to look at the multidimensionality of stress. They felt that stressors could be factored out into aspects of work. Most administrative and management occupations require a person to fulfill several roles. Koch and colleagues believed that stressors could also be factored out. They wanted to develop a questionnaire that specifically fit administrators of educational institutions. They were also interested in associating subjectively experienced stress and respondent characteristics such as age, years of experience, position, and physical health.

Administrative Stress Index (ASI)

The initial questionnaire core of the ASI consisted of the 15 items of the Index of Job Related Strain (Indik et al., 1964). "This index was supplemented by items suggested from a review of current publications for public school administrators and by items suggested from stress logs that were kept by 40 school administrators for one week"(Koch et al., 1982, p. 494). The 35 item ASI was given to 1,855 Oregon school administrators. Out of this sample, 1,156 usable questionnaires were obtained. They were randomly split into two equal samples.

The underlying structure of the ASI was determined by subjecting samples 1 and 2 to a principal components varimax solution with a maximum specified

> eigenvalue of 1.0. Items that failed to earn at least a .30 on any factor were dropped from subsequent analysis. (Koch et al., p. 495)

After the analysis of both samples, 10 items were dropped. The remaining 25 items were consistent across both samples. These items clustered around four factors: (a) role-based stress; (b) task-based stress; (c) boundary spanning stress; and (d) conflict mediating stress.

Educational Reform in Massachusetts

> Some of the major changes in accountability brought about by the Education Reform Act include these requirements: a school council in every school, continuing education for educators, more authority for every principal, better defined roles for school committees, and clear, concise and measurable statewide standards for students and schools. The capstone will be a "high-stakes" test based on the new curriculum standards which every student will need to pass in order to receive a diploma. (Massachusetts Department of Education, 1997, p. 1)

In the Commonwealth of Massachusetts, the life of a secondary principal has changed dramatically with the passage of the Educational Reform Bill of 1993. This Bill resulted in increased job responsibilities and pressure to demonstrate that students in the school system are learning, as measured by performance on standardized tests. In this bill, principals were given both more responsibilities and more power to carry out those responsibilities. At the time of this writing, the Reform Act is in its seventh year of implementation.

Possible Sources of Principal's Stress

Key new responsibilities for principals in Massachusetts include:

1. Co-chairpersonship of newly designated School Councils that include representation by parents, teachers, and students (at the high school level).

2. Fiscal responsibility for the school budget at the site.

3. Responsibility for hiring and firing personnel, given solely to the principals and taken away from the School Committees.

4. Broad-ranging control over student discipline, including expulsion powers in instances of teacher assault, selling of drugs, and possession and/or use of weapons.

Key shifts in influence include:

1. Principals are no longer eligible to belong to a bargaining unit but must negotiate their own contracts.

2. Principals could be dismissed for good cause as altered from the former 'just' cause.

3. Principals negotiate their contract with superintendents and, in order to protect employment, need to have language that replaces the former tenure language.

In addition, the structure of most high schools has changed due to regulations included in the Educational Reform Act that require that students be involved in 990 hours of structured learning time. "Structured learning time shall mean time during which students are engaged in regularly scheduled instruction, learning activities, or learning assessments within the curriculum for study of the 'core subjects' and 'other subjects" (Massachusetts Department of Education, 2001, p. 1).

All secondary schools are now required to provide 990 hours of direct instruction within each school year. These hours are subject to an audit process every five years. Principals, while possessing new powers, have new responsibilities and are functioning, for the most part, with the same staff configurations.

The last phase of The Educational Reform Act involves setting performance standards for each discipline and developing assessment instruments geared to these standards. The 1999 – 2000 academic year is the third year of the statewide assessment system.

> The Massachusetts Comprehensive Assessment System (MCAS) will measure student understanding of the learning standards in the curriculum frameworks. The state test will measure student, school and district achievement at grades four, eight and ten in the core subjects of mathematics, science and technology, history and social science, English/language arts, and eventually, foreign languages. (Massachusetts Department of Education, 2000a)

For the class of 2003, the assessments in English and mathematics must be passed in order to qualify for graduation from a public school in Massachusetts.

The MCAS test results are reported statewide each December. Communities are listed in comparison fashion in all the major newspapers. In addition, the MCAS scores are part of Massachusetts's formula to evaluate school systems, and all schools in each community will be given a report card.

Through all of this change, the principal is considered responsible for whether or not a school is successful by the new measures. In some systems, principals' contracts

have become tied to the MCAS scores. On the basis of 1999 scores, the Department of Education gave $10,000 bonuses to five principals of high achieving schools.

"Five Massachusetts public school principals-three high school, one middle school and one elementary-were presented $10,000 each in recognition of their schools' significant gains on the 2000 MCAS tests" (Massachusetts Department of Education, 2000b, p. 1). Thus far, there has been no bonus programs established for teachers as regards student MCAS achievement.

The Research Problem

The purpose of this study is to examine whether any significant differences exist between the reported stress levels of Massachusetts's principals and his or her high school's performance in the tenth grade in the English, mathematics, and science sections of the 1999 MCAS assessments. This research examines whether any significant differences exist between the size of the school and the Administrator's Stress Index (ASI) scores in each of the four sub-scales of the ASI. Demographically, the ASI scores will be correlated with the selected personal characteristics of age and years of experience. Finally, the research examines whether any significant differences exist between the gender of the principal and the sub-scores of the ASI.

Delimitations of Study

1. The participants were limited to secondary principals in the Commonwealth of Massachusetts in the spring of 2000, who were not randomly selected.

2. Perceptions of stress will be limited to those stress categories identified by the Administrator Stress Index (ASI).

3. Respondents are limited by their own personalities.

4. Age, years of experience, and gender might be limited by the number of respondents.

5. Stress measured by the ASI might be associated with other factors rather than MCAS test results.

6. MCAS standard scores are reported by respondents and might not be accurate.

7. Stress reported by principals might be associated with their system's response to scores rather than the scores themselves.

8. The ASI will be self-administered. This is dependent on voluntary participation and accurate perception of the respondents.

9. The ASI is neither completely reliable nor completely valid.

Hypotheses

The following hypotheses will be tested in this study:

1. There are no significant differences between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of student performance on the MCAS Assessments given in the spring of 1999 to tenth grade students.

2. There are no significant differences between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of the size of the school.

3. No significant relationship exists between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of the age of the principal.

4. No significant relationship exists between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress between high school principals and the independent variable of the experience of the principal.

5. There are no significant differences between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of the sex of the principal.

Definitions of Terms

Boundary-Spanning Stress: Stress experienced by administrators because of relating the school to the external environment. These factors occur when dealing with issues that relate the school to the external environment, for example, collective bargaining, dealing with regulatory agencies, and gaining support for the budget. ASI items 21, 24, 27, 29 & 35 measure this stress type.

Conflict-Mediating Stress: Stress related to solving conflicts within the school environment. Such conflicts occur between student-student, student-teacher, and teacher-teacher. ASI items 7, 20, & 23 measure this stress type.

Role-based Stress: Stress that arises from conflict over the role the principal (administrator) plays in the organization. ASI items 5, 6, 13, 16, 22, 30, & 34 measure this stress type.

Task-based stress: Stress arising from the performance of one's day to day administrative tasks. This involves both coordination and communication activities. ASI items 1, 2, 9, 10, 12, 14, 18, 26, 31, & 32 measure this stress type.

Educational Reform Act of 1993: An act of the legislature in 1993, establishing standards for all public schools in Massachusetts.

Massachusetts Comprehensive Assessment System (MCAS): An assessment program initiated in 1998 to assess whether students in grades 4, 8, & 10 are meeting performance standards established by the Commonwealth. Beginning with the Class of 2003, the tenth grade assessments in English and mathematics must be passed in order to qualify for graduation from a public high school or vocational school in the Commonwealth. Performance levels are measured in a 200 – 280 scale with performance levels as follows:

advanced Score: 260 – 280; proficient score: 240 – 259; needs improvement score: 220 – 239; and failing score: 200 – 219. Students must earn a minimum score of 220 in English and mathematics in 2003 to qualify for graduation from a public high school in the Commonwealth of Massachusetts.

Secondary School Principal: Any principal in Massachusetts whose school includes the tenth grade.

Years of experience: Refers to the total number of years that the person has been a building principal at the secondary level (grades 7 – 12 or 9 – 12).

CHAPTER II

Review of the Literature

"Contemporary research on psychological stress emerged more than a quarter century ago, stimulated by the desire to understand breakdowns in adaptive behavior observed in extreme situations" (Holroyd & Lazarus, 1982, p. 21). This quotation from the 1980s refers to the extreme situations of military combat, concentration camps, bereavement, and traumatic injury. From this catastrophic event viewpoint came the work of Hans Selye who, in 1976, defined stress as, "the nonspecific response of the body to any demand" (p. 1). With this definition, Selye captures the essence of the response-created theory of stress. Stress does not describe factors in the outside world, but rather a person's response to those factors. Our reaction is the self's attempt to maintain internal equilibrium. For Selye, a person's response to stress is, "usually the outcome of a struggle for self-preservation (the homeostasis) of parts within a whole" (p. 367). Although there may be some impact from the stimulus itself, how the organism responds to the stimulus makes up the true consequences of the stressful situation. Selye described distress responses as occurring in three different phases: (a) alarm reaction, (b) resistance, and (c) exhaustion. This triad of physical responses to stressors is termed the general adaptation syndrome (G.A.S). "Selye depicted stress as an orchestrated defense operated by physiological systems designed to protect the body from environmental challenge to bodily processes" (Hobfoll, 1989, p. 513).

The second of three commonly held viewpoints about stress describes stress as inherent in the stimulus. Stimulus oriented theories view stress as arising within a stimulus provided by the organism's environment (Cox, 1978; Elliot and Eisdorfer, 1982; Ivancevich & Matteson, 1980; Kanner, Coyne, Schaefer & Lazarus, 1981). From this theoretical perspective, the characteristics of the person's environment constitute the root cause of stress. They are events that normally lead to stress reactions. "That is, if the stimulus usually leads to emotional upset, psychological distress, or physical impairment or debilitation, then the stimulus is said to be a stressor" (Hobfoll, 1989, p. 514).

The transactional theory is the third commonly held theory of stress. Lazarus and Folkman (1984) define stress as the relationship between the person and the environment. A person may or may not perceive the environment as taxing. Examining stress from this perspective expands the construct of stress to include factors that a person brings to the stressful situation. Interactional theories, therefore, place primary importance on both the person and the environmental stressor (Lazarus, 1976). "These theorists take a normative approach to defining events and occurrences as stressful; if the event typically leads to psychological distress, behavioral disruption, or deterioration in performance, then it is characterized as a stressor" (Derogatis & Coons, 1993, p. 201).

Although not applicable to this study, it should be noted that stress might have a positive impact and be motivational for the person dealing with a situation. Sarros (1988) states,

> Stress can be both distressful or eustressful; it can lead to feelings of anxiety and lowered self-esteem, or it can provide an individual with a desire to achieve. The manner in which the individual perceives a situation as presenting a threat or a

challenge as becoming distressful or eustressful, determines the stress response. (p. 185).

Occupational Stress

The extent to which stressful job factors affect employer health and well-being remains one of the most fundamental questions for industrial-organizational psychology (Spector, Chen, & O'Connell, 2000, p. 211). Two government agencies were created in the early 1970s and recognition of stress in the workplace was established. The Department of Labor created the Occupational Safety and Health Administration (OSHA) and the Department of Health created the National Institute of Occupational Safety and Health (NIOSH). Standards of workplace health became the purview of OSHA, and NIOSH was charged with conducting research to legitimize the standards (Holt, 1993). The key research preceding the creation of these agencies was the Life Extension Institute of New York City's research conducted from 1958-1972 indicating that stress-related disease had increased dramatically during that time period (Chase, 1972).

The environmental conditions leading to undesirable psychological or physical conditions provide the foundation for the field of occupational stress. Research in the field of occupational stress focuses on stress as the independent variable that produces undesirable consequences under certain conditions. These conditions may be moderated, at times, by factors such as age, experience, or training (Holt, 1993).

Occupational stress is often viewed through the lens of the person-environment fit model. The person-environment fit model has two prongs: the skills of the individual match the needs of the position and the job environment matches the needs of the person.

When there is a discrepancy, there exists occupational stress (Allison, 1997; French, 1994).

Measurement of Stress

The self-reporting method for the measurement of stress is traced to Golden in 1883 and Woodworth in 1918. Woodworth developed a Personal Data Sheet to screen psychiatric disorders in World War I. This instrument served as a prototype for subsequent measures of stress (Derogatis & Coons, 1993). Self-reports remain the most reliable measures of experienced stress. A key to understanding stress lies in uncovering the person's level of response to events or situations. "Although quantifying stress reactions is the goal of researchers, neither biological markers, nor other party ratings or judgements have taken over for basic self-reporting" (Derogatis & Coons, 1993, p. 201).

In the field of occupational stress, it is assumed that self-reported data provide accurate insight into the relationship of the environment and negative outcomes. The causal flow is from the perceptions to outcomes (Spector, Dwyer, & Jex, 1988). What an individual perceives and reports as negative in the environment is accepted as leading to an undesirable outcome. The relationship between stress outcomes and job stressors was the basis of Spector, Dwyer, and Jex's work. Comparing the supervisor's report on the individual's job satisfaction with self-reported data, they found a high correlation between reports. This finding enhanced the validity of self-reporting. "The high correlation between the supervisor's and subordinate's report of the subordinate's job satisfaction is evidence for the convergent validity of these reports" (p. 18).

In 1963, the Index of Job-Related Strain was developed to, "discover the degree and form of association between certain demographic characteristics (age, sex, and educational attainment) and the incidence of psychological strain among employed adults" (Indik et al., 1964, p. 26).

Indik & colleagues (1964) work was based on a sample of 8000 participants who were given three different indices: (a) one concerned with economics (ES); (b) one concerned with work (JRS); and (c) one concerned with psychosomatic symptoms (PS). In the area of work, 15 items were listed that could 'bother' adults at work. The correlations of the responses to the 15 items were higher between the Index and each item than they were between items. Using a split-half method of correlation, the author estimated reliability at .85. This index later become the basis of an Index designed specifically for educational administration, the Administrative Stress Index (ASI).

In the area of educational administration, Koch, Tung, Gmelch, and Swent (1982) focused their work on the multi-dimensionality of stressors within administrative positions. The theoretical basis of their work was previous work that had not attempted to factor stressors by administrative roles. Their study of Oregon School Administrators provided the operational basis for the development of the Administrative Stress Index. They surveyed 1,855 school administrators and achieved a 60% response rate. The objectives in the study were to identify job situations that were stressful and to cluster these situations.

The study attempted to maximize the internal validity of the instrument by establishing a questionnaire that specifically was designed for administrators of educational institutions. They expanded the understanding of educational job stress by

establishing that an administrator's stress could be related to job tasks. "Principal-component analysis of the ASI revealed four interpretable factors that were consistent with theoretically derived models of occupational stress" (Koch, Tung, Gmelch, & Swent, 1982, p. 498). The validity of the ASI was established in this large sample study. Of 35 items in the ASI, 25 were factored into four distinct groupings: (a) role-based stress, (b) task-based stress, (c) boundary-spanning stress, and (d) conflict mediating stress.

The Role of the Principal and Stress

Gmelch (1988) highlighted the area of administrative stress, "Over 70 studies, since 1978, have explored the causes, reactions, coping responses, and consequences of administrative stress" (Gmelch, 1988, p. 134). The National Association of Secondary School Principals' Bulletin (NASSP Bulletin) has carried numerous articles in the past 20 years detailing the stressful life of the secondary principal. The focus of this widely-read educational journal is that a principal's life at work is becoming unmanageable and that high school principals experience significant job-related stress (Brimm 1983; Gmelch 1982; Gmelch and Swent 1981; and Marshall 1981).

Gmelch and Swent (1981) reviewed the top 10 stress-causing factors for principals to develop a basis upon which to build programs. They posit that management of administrative activities, that is, an issue of time, is the number one stress factor for a principal.

In a related study, however, Farkas (1982) used the Index of Job-Related Tension (IJRT) and found that principals did not report stress as part of their jobs. His study

surveyed both elementary and secondary school principals in two counties in western New York. The study sample was 198 respondents. All respondents were given the I-P-C Scale; the Index of Hierarchy of Authority; and the Index of Job-Related Tension. This third instrument's 15 items are the basis of the Administrative Stress Index developed by Gmelch. Means and standard deviations on the Index of Job-Related Strain were 20.8 and 13.2 respectively. In general, principals do not report stress in this study. Of the reported stress, men report more stress than women. This study, however, seems to stand alone while all others indicate that stress is a major part of the principal's job. Perhaps the Index of Job-Related Strain is not specific enough to elicit stress response situations from principals.

Williamson and Campbell (1987) posit four major factors related to stress: (a) management of time; (b) relations with supervisors; (c) relations with subordinates; and (d) matters of finance. Working in the same time period, Cooper, Sieverding, and Muth (1988) studied twelve principals using sensitive heart-rate monitors to measure physiological stress. Each principal was shadowed for three consecutive days while at work. In addition to the monitor, administrators kept work logs and these were correlated with their heart rate readings. "Given the magnitude of stress levels observed in these secondary school principals, serious consideration must be given to ways to reduce stress levels" (p. 217). This study, although having a small sample size, is nonetheless noteworthy because of its physiological component. In 1988, Lam's results for a study of 256 principals in Manitoba caused him to state, "(These results) leave little doubt that school administrators job-related stress is a highly complex phenomenon that necessitates a systematic examination through a comprehensive model" (Lam, 1988, p. 263).

"By their nature, schools are fertile grounds for conflict. The conflicts that occur frequently result in stress for principals, particularly secondary principals" (Lyons, 1990, p. 44). Lyons posits five areas of conflict and stress for principals that seem to encompass the current vision of what is expected of principals: (a) role conflict; 9b) demands for instructional leadership; (c) demands for problem solving; (d) management of time; and (e) external political stress. This finding is a theoretical construct drawn from readings in the area of stress and is supported by studies done in the 1980's (Blumberg & Greenfield, 1986; Duke, 1988; McCormick, 1987).

Lyons (1990) posits that two-thirds of the principal's day is spent responding to the initiatives of others, which leaves little time to be proactive and plan initiatives. In order for principals to fulfill expectations, someone else must be managing the building and all that entails.

Federal program priorities, the adoption of state curriculum standards, and the implementation of site-based decision-making are other changes creating new demands on the principalship. Hipps (1990) studied the impact of Alabama Performance-based Accreditation on job stress and job satisfaction. She surveyed 236 teachers and principals to develop a Measure of Educator Stress. Findings indicate that stressors related to relationships, salary and compensation, and school environment were negatively related to satisfaction with the position. Age and gender were not associated with satisfaction. This study combined teachers and administrators and involved only nine school districts in Alabama. It, however, is focused on only a small sample of Alabama schools specifically in relation to that state's accreditation standards.

Carr (1994) studied a small sample of 100 principals in South Australia. Using all self-reported data, he found that a significant number were having difficulty adjusting to the demands of the job.

"In the high school principalship, stress has been shown to be a reality, and pressure for change develops daily" (Tanner, Schnittjer, & Atkins, 1991, p. 211). This study was designed to see what impact the use of time-management techniques had on the level of stress of high school principals. This study challenged the assumption that these techniques helped manage stress. Although time is often mentioned as a stress factor for the principalship, the use of time management in this study appears to have no impact. Terrill (1993) takes the theoretical position that a principal must control whatever he/she can. He states:

> Principals are sandwiched between higher authorities and boards of education on the one hand and multiple constituencies on the other. They have the liabilities of most public agencies, coupled with the myriad problems of middle managers. In tough times, the sandwich may feel more like a vise or a press. Each new directive, each educational crisis, and each constituent demand seems to increase the tension and reduce the satisfaction of the principal's job. (Terrill, 1993, p.89)

One way to cope with the increased workload would be to delegate more leadership roles. Payzant and Gardner (1994) found that principals are having difficulty doing this because they are from the school of 'leadership as control'. Sharing power is a difficult challenge for most principals because it runs counter to their notion of how an effective principal functions. "Some principals felt threatened by the concept of shared

governance because they were familiar only with a top down approach to running a school" (p. 12).

Mackler's (1996) interview research delineates four significant areas of concern for principals: (a) the definition of their role; (b) the power and authority to do the job; (c) work relationships; and (d) the respect, recognition, and rewards of the job. In her research, the problem of role definition is that the principalship has become a, "work in progress," rather than a defined set of tasks and expectations. The principalship is moving from a manager of a productive status quo to a facilitator of change. With the job in great flux she states, "The principalship is just too much. You can only do parts of it. You just can't do the whole job." (p. 85). In Mackler's dissertation, principals reported being worn down and exhausted. Her sample of 20 Vermont principals is limiting in terms of generalizing to all principals.

In a similar vein, Wells' (1997) doctoral research focused on superintendents in Kentucky after mandated state reform. Wells developed a survey instrument collecting both quantitative and qualitative data. She followed up mailed surveys with interviews of 10 superintendents who indicated willingness to be interviewed.

> Results of the analysis indicated superintendent's role changes with all three sets of data consistently reporting changes in the areas of: increased paperwork, stress, work related activity, responsibility, and political activity at the site management level; decreased power and authority, ability to influence decisions, job satisfaction, political activity at the board level; and altered relationships with the public, Board of Education members, and teachers. (p. 2018)

Portin, Shen, and Williams (1998) mailed out 2,431 questionnaires to administrators in the State of Washington. Eight hundred and forty were returned (34.6%) and 687 were from principals with more than five years experience. Their conclusions of an unmanageable work load were based on a sufficiently large sample to maintain validity. Mackler (1996) interviewed 20 principals in Vermont for her dissertation. Her findings of principals being overwhelmed with work preceded with Portin, Shen, and Williams's findings.

Gmelch and Gates (1998) reported on an earlier 1991 study of 1000 educational administrators. Of this sample, 177 were secondary principals. These administrators reported that 65% of their total stress was job related. This sample size seems noteworthy even though the data is a decade old.

In 1998, in Michigan, Cooley and Shen (2000) studied 198 teachers, 306 principals, and 370 superintendents about their perceptions of applying for administrative positions, specifically in reference to the urban principalship. A majority of the 306 principals surveyed rated stress as the number one deterrant to applying for that type of position. "The emotional aspects of the position, stress, bureaucratic mandates, frustration, and burnout impact applying for principalship positions (Cooley & Shen, 2000, p. 448).

State-wide Standardized Testing Programs and Stress on the Principal

In June, 1993 the Commonwealth of Massachusetts legislature enacted a far-ranging Education Reform Act that was signed into law by then Governor William F. Weld. The Act defined a process for establishing and assessing curriculum standards,

established a baseline foundation budget for every school district, established specific criteria for teacher/administrator certification, mandated the establishment of School Councils in all public schools, gave principals control over the most serious discipline issues, removed personnel issues from the purview of School Committees, took principals out of collective bargaining units, defined standards of Time and Learning for all schools, and established time limits for implementation of all regulations. In general, the act was an act of accountability and financing that has impacted all aspects of public education in the Commonwealth of Massachusetts (Massachusetts Department of Education, 1997).

This Act dramatically impacted the public high school principal in Massachusetts. At the secondary level, principals have greater control over discipline as a management issue but greater responsibility for instructional leadership. The assessment of academic progress for each public school system is under the umbrella of the Massachusetts Comprehensive Assessment System (MCAS). These assessment measures are given in the 4^{th}, 8^{th}, and 10^{th} grade to all but the most seriously handicapped students. Assessments are in the areas of English/language arts, mathematics, science and technology, and social studies.

Currently, assessments in English/language arts and mathematics are termed "high stakes" because the Class of 2003 must earn a passing grade in these two areas in order for a student to qualify for graduation from any public high school. In addition, all school systems are being compared with each other on all assessments and scores by school and district. These scores are reported each year. Beginning in 2001, school districts must show an established level of improvement in order to maintain status with

the Department of Education. The report cards issued for districts by the Department of Education will be sent out each year and remediation plans will be required of districts whose performance is lagging (Massachusetts Department of Education, 2000).

The MCAS, more than any of the other changes in the Education Reform Act by far, provides a ready measure of a school's performance compared to other schools. As academic leader, the principal is responsible for his/her school's performance. In fact, principals are targets for community displeasure on this issue with cuts in salary proposed in some under-performing communities. Principals must find a way to improve test scores and school ratings while maintaining all the other aspects of their position.

The Administrator Stress Index (ASI) used in this present study categorizes responses to stress into four sub-categories. This research focuses on the discovery of whether reported data on MCAS results impacts the stress level of the principal is captured in the four sub-categories on the ASI. In 1986, Feitler and Tokar stated, "The issue of stress in education, for both teachers and administrators is important. We are losing too many educators who indicate that some aspect of their work life is too stressful (p. 269). Is this aspect of work life currently due to the achievement demands of the Educational Reform Act of 1993, specifically, the MCAS assessments? It does not appear that any current studies address this question.

Size of School and Stress on the Principal

The body of research relating size of school and stress is small with mixed findings. Tanner, Atkins, and Truman (1990) surveying over 500 principals on the use of time-management techniques as a means of reducing stress found that in schools of fewer

than 500 students, principals did not use techniques as often. "Principals serving in schools having fewer than 500 students reported a significantly lower percentage of effectiveness in managing their time than principals in larger schools" (p. 32). In contrast, principals in schools of over 1000 students used time-management techniques extensively and reported lower stress levels.

In an earlier study, Williamson and Campbell (1987) used the ASI to survey 243 principals and isolated four factors contributing to stress: (a) management of time, (b) relations with supervisors, 9c) relationships with subordinates, and (d) matters of finance. The crucial factor in terms of the MCAS tests is the management of time. The most significant finding in this study is that principals of smaller schools appear to have less difficulty with time management compared with principals of larger schools. Lam (1988) surveyed 256 principals using three measures: a personal and demographic data sheet; a School Environmental Constraint Instrument (SECI); and a 24-item instrument to assess job-related stress. This component mainly incorporated items from Indik's Job-related Strain Index, from Gmelch's Administrative Stress Index, and a few measuring stress from external sources. Inter-item consistency for the subscales ranged from .78 to .86. He found that size and location of the school was only moderately related to stress. The interaction of possible stressors indicated that school administrator stress was very complex. Administrators in larger schools were only experiencing slightly higher levels of stress (Floerke, 1988; Horgan, 1992; & Marshall, 1981).

Age, Years of Experience, and Stress on the Principal

Cooper, Sieverding, and Muth's study (1987) of the heart rates of 12 high school principals during three normal workdays indicates that principals with fewer than 3 years experience have 5.9 more hours of job stress per week, which was significant. Lam's (1988) study also found that age was negatively associated with stress. The older a person was, the more he or she saw change as stress producing. In addition, "Both the lengths of teaching and administrative experiences were negatively related to the stress associated with the authority structure of the school" (p. 255). His findings suggest that any change in the authority structure of the school produced more stress in the older, more experienced administrator.

Contrasting to this study is a 1990 survey of 580 National Association of Secondary School Principals principals that involved the use of time-management techniques. Tanner, Atkins, and Truman (1990) found that older, more experienced principals used time-management techniques more readily and showed less stress. The premise of the study was that time-management had a positive impact on the reduction of stress in the principalship. Both principals in the 43 to 50 year old age grouping and those with more than 18 years experience demonstrated less stress and more use of time-management techniques.

Wiggins (1988) surveyed 61 secondary principals and found that in the younger age grouping (35 to 40), the majority rated their health excellent despite perceptions of moderate to high levels of job stressfulness. This is in agreement with Lam's findings. Sarros (1988) studied principals in terms of burnout as defined by the Maslach Burnout Inventory. The three factors of depersonalization, emotional exhaustion, and personal

accomplishment were studied. He surveyed 128 administrators, 64 principals, and 64 assistant principals, and found that principals showed less burnout than expected. Administrators with more than 16 years in a system, however, showed a higher degree of depersonalization.

Williamson and Campbell (1987) found that older principals (50 to 59) experienced a higher level of stress associated with personal relationships at work. This contrasts with Tanner, Atkins, and Truman's study showing less stress in this age group. Williamson and Campbell posit that older principals are receptive to change that is inevitable. Whitaker (1992) studied 107 principals using the Maslach Burnout Scale and found that younger principals (35 to 44) experienced more intense feelings of emotional exhaustion. This seems to contradict Wiggins finding of excellent reported health in this age group. In Whitaker's study, high school principals reported higher scores in the same category than did middle school or elementary principals. Whitaker's study corroborated Sarros work and indicated that the longer a person was in an administrative position, the higher the depersonalization score reported, although some studies find less stress in the principals with more years experience (Foster, 1992; Handy, 1989; Mandeville, 1984; Marshall, 1981; Pate, 1991; Roesch, 1979; Sievert,1982; Siler, 1983; Tanner, Atkins, & Truman,1990).

Gender and Administrative Stress

"From its inception, school administration has been male dominated and male defined (largely white male); that is, explained, conceptualized, and seen through the eyes of males (Mertz & McNeely, 1998, p. 197). These two researchers did a case study

of two female high school principals, the purpose of which was to develop a picture of how women respond in high school principalships. Through the study, they were attempting to operationalize the theoretical base that Shakeshaft (1989) posited, "Studying male behavior, and more particularly white male behavior, is not in and of itself a problem. It becomes a problem when the results of studying male behavior are assumed appropriate for understanding all behavior" (p. 325). Although males continue to dominate the administrative ranks within school districts, advancement of females into these positions is significant (McCarthy & Zent, 1980; Mertz & McNeely, 1988).

Using data from the Oregon School Study, Tung (1980) analyzed the stress profiles of 108 female respondents and 1,048 male respondents to the Administrator Stress Index.

> These findings tend to show that for the sample of Oregon school administrators, women were equally good, if not better, candidates for administrative positions because they experienced significantly lower levels of self-perceived stress then their male counterparts on almost all dimensions of stress, particularly with respect to boundary-spanning stress and conflict mediating stress. (Tung, 1980, p. 352)

Some studies concerned with stress of administrators and gender find a relationship and some do not. Sievert (1982) used the ASI to survey male and female elementary principals. In addition to the traditional four dimensions profiled by the ASI, she added a fifth, home-family dimension. No significant differences were found on the initial four factors between male and female respondents. The fifth factor, however, showed that females reported a higher level of stress than males. Boyenga (1978)

surveyed 152 male and female university professors to study possible connections between work and family in the area of stress. One significant finding was that gender did correlate with high or low reported stress levels. In 1996, Napier studied whether a relationship existed between administrative stress and leadership styles particularly as it related to gender. The results did not reveal a significant relationship between leadership styles and the constructs of role-related or conflict mediation administrative stress by gender. "The increasing presence of women in administration has fueled the debate about whether females and males lead differently, see the situations in which they find themselves differently, and/or think differently about the work and the people with whom they work" (Mertz & McNeely, 1998, p. 197).

Gardiner and Tiggemann (1999) studied the impact of working in either female dominated or male dominated industries on the leadership style, stress levels and mental health of 60 male managers and 60 female managers (p. 72). Women report higher job stress than men on three factors: (a) the organization, (b) discrimination and (c) tokenism. They theorize, however, a tendency for women to be more willing to report they are under stress than men. These findings do support earlier findings that woman leaders face more increased work stressors than men (Bellamy & Ramsay, 1994; Davidson & Cooper, 1983; Powell & Butterfield, 1979). In contrast, Lam (1988) studied 300 Manitoba Association of Principals members and asked them to respond to a biographical data sheet, a School Environmental Constraint Instrument (SECI), and a 24-item survey that was a combination of the Indik Job-related Strain Index and the ASI. Lam states that his inter-item consistency for the subscales was in the range of .78 to .86

(p. 255). He failed to find gender differences accounting for differences in reported stress levels.

CHAPTER III

Methodology

This chapter describes the participants studied, the instrument utilized, and the procedures followed in analyzing the data. The primary purpose of this study is to discover whether any significant differences exist between the reported stress levels of secondary principals and their schools' performance on the 1999 MCAS assessments in the Commonwealth of Massachusetts. The study also compares the personal characteristics of age and years of experience with reported stress levels. Finally, the study examines whether any significant differences exist between the size of the school and the sex of the principal with reported stress levels.

Participants

The subjects for this study were non-randomly selected Commonwealth of Massachusetts secondary school principals whose schools contained a tenth grade that took the MCAS assessments in May of 1999. Participants were 171 principals of vocational schools, regional schools, 9^{th} – 12^{th} grade high schools, and 7^{th} – 12^{th} high schools. The study excluded private and parochial schools and their principals. The schools and principals were taken from the New England Association of Schools and Colleges Directory, 2000. There are 283 secondary schools that have 1999 10^{th} grade MCAS data.

Procedures

The primary procedure employed in this study was data collection and subsequent analysis. All non-randomly selected principals ($\underline{n}$ = 283) were sent a solicitation letter (Appendix B), the Administrative Stress Index (Appendix C); a biographical page (Appendix D), and a reply envelope. On the biographical page, respondents were asked to report MCAS standard scores.

The Instrument

All participants were sent the Administrative Stress Index (ASI) developed by Koch, Tung, Gmelch, and Swent (1982). This instrument was designed to measure stress on administrators from on the job situations. The Administrative Stress Index (ASI) evolved from the 15-item Index of Job Related Strain (Indik, Seashore, & Slesinger, 1964). In the first phase of ASI item development, 40 school administrators kept stress logs for one week. Each day they were asked to report the most stressful single incident occurring, as well as the most stressful series of related incidents. The administrators also had the opportunity to identify other sources of stress that might not have occurred during the week but were considered stressful. "The pilot instrument was field tested with a group of 25 practicing administrators to ensure that respondents were clear about the terminologies used. After revision and a second pilot test (n = 20) the final instrument consisted of 35 items"(Koch, Tung, Gmelch, & Swent, 1981, p. 494). Of the 35 factors cited in the stress logs, these were listed with the greatest frequency: Complying with state, federal and organizational rules and policies.

1. Feeling that meetings take up too much time.

2. Trying to complete reports and other paperwork on time.

3. Trying to gain financial support for programs.

4. Trying to resolve personnel conflicts.

5. Evaluating staff members' performance.

6. Having to make decisions that affect the lives of individual people that I know (colleagues and staff members).

7. Feelings that I have too heavy a workload, one that I cannot possibly finish during the normal workday.

The participants of the initial survey sample all belonged to the Confederation of Oregon School Administrators (n = 1,855). There were 1,207 questionnaires returned and of these, 1,156 were usable for a 62.3% response rate. To examine the factor structure, the sample was randomly divided into equal halves of 578 participants each. In each of the samples, the average respondent was 42 years old principal with 11 years of experience. The initial validation sample of 578 produced four dimensions within the ASI. The first factor, role-based stress, consisted of seven items that produced internal consistency of between .40 and .67. The second factor, task-based stress, consisted of ten items showing a .33 to .70 range of consistency. The third factor, boundary-spanning stress consists of five items with a range of .43 to .60. The fourth factor, conflict-mediating stress, is comprised of three items between .56 and .86. Factor one accounts for 50% of the variance, factor two accounts for 22%, factor three accounts for 16%, and factor 4 accounts for 12% of the variance.

In the cross-validation study, 53% of the variance was associated with factor one, 21% was associated with factor two, 14% was associated with factor three, and 14% with fourth factor.

Between the validation and cross-validation samples, the coefficients of internal consistency are all .70 or higher. Between any two factors, the greatest amount of shared variance is $r = .38$ ($r^2 = .14$). This occurs between factor one and factor two. The factors are relatively independent of each other. "To maximize internal validity of the instrument the questionnaire was developed specifically for use on a homogeneous population, namely administrators of educational institutions" (Koch, Tung, Gmelch, and Swent, 1982, p. 493).

The four factor areas are as follows: task-based stress, boundary-expanding stress, conflict-mediating stress, and role-based stress. Task-based stress refers to the day-to-day work of the administrator and whether that work causes stress. Boundary-spanning stress surveys the areas of management that have to do with community interactions and collective bargaining. Conflict-mediating stress refers to stress caused by the mediation of day-to-day conflicts that occur in schools. Role-related stress refers to administrators' perceptions concerning their role interactions and their own beliefs about their place in the organization. As stated in the introduction, "Task-based, role-based, and conflict-mediating stress appear to be common to all administrative occupations; boundary-spanning stress, however, seems to be peculiar to public school administrators" (Gmelch, 1983, p. 513). Koch, Tung, Gmelch, and Swent's research in 1982 indicated that there was a contrast between the stress profile for principals and that

for superintendents. In general, principals reported role-based and conflict-mediating stress, whereas superintendents reported boundary-spanning stress.

MCAS Program in Massachusetts

In 1999, all tenth grade students in Massachusetts took these assessment tests in English Language Arts, mathematics, and science. It was the second year of this assessment program.

For the MCAS program the approach to estimating the reliability was to utilize the split-half estimate of reliability. The statistic used was Cronbach's Coefficient Alpha (ά). The reliability for English Language Arts (n = 55, 000) is 0.92. For mathematics, the reliability (n = 61, 000) is 0.93. For science, the reliability (n = 60,000) is 0.91. In addition, the Department of Education compared the Alphas of the MCAS with the alphas of both the Stanford 9 test and the Advanced Placement tests of the College Board. Stanford 9 produces an alpha of 0.93 for English and 0.82 for mathematics. The Advanced Placement program shows an alpha of 0.85 for English and a 0.92 for science (Massachusetts Department of Education, 1999, p. 5).

In terms of content validity, the questions on the tests mirror the standards found in the Massachusetts Curriculum Frameworks. After the test, all items are subject to a review and are open to the public. "After the test is developed and administered, each MCAS test is subjected to as broad a review of content validity as possible" (Massachusetts Department of Education, 1999, p. 8).

In terms of criterion-related validity, the Department of Education commissioned two external studies to examine the validity of the tests. "The studies examined the

relationship between the performance of students in two large Massachusetts school districts on the 1998 MCAS tests and a locally administered, national, standardized achievement test" (Massachusetts Department of Education, 1999, p. 8). The standardized tests used for the tenth grade were the Metropolitan Achievement Test (MAT-7) and the Stanford 9. The studies concluded that students who scored at the higher levels on these tests also scored at the higher levels (advanced and proficient levels) on the MCAS tests. In English Language arts, the coefficient alpha was .93 with the Stanford-9 and .85 with the Advanced Placement tests. In mathematics, the coefficient alpha was .82 with the Stanford-9 and .92 with the Advanced Placement tests. For science and technology, the coefficient alpha was .79 with the Stanford-9 and .92 with the Advanced Placement tests.

For construct validity, the same studies produced correlations of 0.80 between the MCAS English Language Arts and the standardized reading tests and 0.84 between the MCAS mathematics tests and the standardized mathematics tests in the two large districts (Massachusetts Department of Education, 1999).

Data Analysis Plan

Data was collected on the age, gender, and years of experience of the principals. This data will be presented in a frequency distribution utilizing percentages and cumulative percentages. Means and standard deviations will also be prepared. Data collected on the schools will be the size of the school in terms of number of students for whom the principal is responsible. Schools will be placed in categories of less than 500

students, 500 – 1000 students, 1000 – 1500 students, 1500 – 2000 students, and 2000+ students.

For the Administrative Stress Index, means and standard deviations will be given for each of the 35 responses as well as for each of the four clusters: (a) role-based stress; (b) task-based stress; (c) conflict mediating stress; and (d) boundary-spanning stress. Means and standard deviations will also be presented for the demographic and personal variables. Data will be displayed by characteristics and clusters, and comparisons will be done by using Pearson correlations; a t-test; and analysis of variance (ANOVA). The level of significance throughout will be .05. SPSS 10.0 statistical software will be used for statistical computations.

CHAPTER IV

Results

This chapter presents the statistical data gathered from this study. Initially, the chapter presents descriptive data on the demographic variables for the participants and high schools represented. Data is also presented on the Administrative Stress Index. Finally, the hypothesis tests are presented.

Demographic Analysis

One hundred seventy-one secondary school principals in the Commonwealth of Massachusetts participated in the initial phase of this study. Thirty-five (20.5%) of the participants are female and 136 (79.5%) are male. The age of the participants is presented in a frequency distribution (Table 1). The mean age is 51.77. The median age is 53 and the standard deviation is 5.87.

In terms of experience as a secondary school principal, there is a wide range in the participant pool. The frequency distribution of years of experience is presented in Table 2. Principals range from one year of experience (12.3%) to 32 years (0.6%). The mean level of experience is 8 years with a standard deviation of 7.5, and a median of 8 years of experience.

Table 3 summarizes the data for size of school by enrollment. There are 29 (16.9%) schools with an enrollment of fewer than 500 students. There are 71 schools

Table 1

Frequency Distribution on Participants' Age

Age	n	%	Cumulative %
31	1	0.6%	0.6%
33	1	0.6%	1.2%
36	3	1.8%	2.9%
37	2	1.2%	4.1%
39	2	1.2%	5.3%
40	2	1.2%	6.4%
41	2	1.2%	7.6%
43	2	1.2%	8.8%
44	2	1.2%	9.9%
45	4	2.3%	12.3%
46	2	1.2%	13.5%
47	7	4.1%	17.5%
48	11	6.4%	24.0%
49	2	1.2%	25.1%
50	14	8.2%	33.3%
51	12	7.0%	40.4%
52	15	8.8%	49.1%
53	17	9.9%	59.1%
54	15	8.8%	67.8%
55	12	7.0%	74.9%
56	7	4.1%	78.0%
57	13	7.6%	86.5%
58	9	5.3%	91.8%
59	6	3.5%	95.3%
60	1	0.6%	95.9%
61	4	2.3%	98.2%
62	1	0.6%	98.8%
63	1	0.6%	99.4%
64	1	0.6%	100.0%

Note. X_M = 51.77 SD = 5.87 Md = 53

Table 2

Frequency Distribution on Years of Experience

Age	n	%	Cumulative %
1	21	12.3%	12.3%
2	10	5.8%	18.1%
3	12	7.0%	25.1%
4	11	6.4%	31.6%
5	11	6.4%	38.0%
6	10	5.8%	43.9%
7	9	5.3%	49.1%
8	10	5.8%	55.0%
9	5	2.9%	57.9%
10	10	5.8%	63.7%
11	3	1.8%	65.5%
12	6	3.5%	69.0%
13	6	3.5%	72.5%
14	8	4.7%	77.2%
15	7	4.1%	81.3%
16	4	2.3%	83.6%
17	1	0.6%	84.2%
18	3	1.8%	86.0%
19	3	1.8%	87.7%
20	4	2.3%	90.1%
22	5	2.9%	93.0%
23	2	1.2%	94.2%
24	2	1.2%	95.3%
26	1	0.6%	95.9%
27	3	1.8%	97.7%
29	2	1.2%	98.8%
30	1	0.6%	99.4%
32	1	0.6%	100.0%

Note. $X_M = 8$ SD = 7.5 Md = 8

Table 3:

Frequency Distribution on School Enrollment

School Enrollment	n	%	Cumulative %
1 – 500	29	16.9%	16.9%
501 – 1000	71	41.5%	58.4%
1001 – 1500	55	32.2%	90.6%
1501 – 2000	13	7.6%	98.2%
2000 +	3	1.8%	100.0%

Note. $X_M = 951.69$ SD = 442.31 Md = 915

(41.5%) with an enrollment between 500 and 1000 students. Fifty-five (32.2%) schools with enrollment from 1000-1500 students, and 16 (9.4%) schools which enroll more than 1500 students. Since only three schools had greater than 2000 students, these schools were grouped with schools over 1500 students.

MCAS Data Analysis

MCAS score data is public record and presented as scaled scores for grade 10 in English, mathematics, and science. Although the scores are available publicly, it was not possible to match participants with their school scores and maintain the anonymity of the respondents. The participants, therefore, were asked to report not only their demographic data, but also their scaled scores, along with their responses on the ASI items.

While 171 respondents completed the demographic data and the ASI instrument, only 135 of those original 171 filled in the MCAS scaled scores. Of this 135, 25 (18.5%) are female and 110 (81.5%) are male. This approximates the same percentages as participated in the first part of the study. Tables 4, 5, 6, and 7 give the frequency distributions for the schools involved in the MCAS portion of the study by the intervals that are used both for individual students and schools in Massachusetts in the areas of English, mathematics, science, and total scores.

MCAS scores are reported in intervals of 20 points (200 – 219 = failure; 220-239 = needs improvement; 240-259 = proficient; and 260+ = advanced). There are no schools in the advanced level in Massachusetts in the 1999 testing period. The majority of schools (82%) have total standardized scaled scores in the needs improvement interval

(660-719). Fourteen percent of the schools have total scores in the failure range (600-619), and 10% of the schools report total scores in the proficient category.

The Administrative Stress Index

Table 8 gives the frequency distributions, means, and standard deviations for the thirty-five items on the ASI. The items range from a low of 1.31 for item 8 regarding expectations of superiors, to a high of 3.99 on item 27 regarding a person's compliance with state, federal, and organizational rules and policies. Other high stress items are:

26. Feeling I have too heavy a workload that I cannot possibly finish during the normal workday (X = 3.95, SD = 2.07).

32. Trying to complete reports and other paper work on time (X = 3.79, SD = 2.44).

31. Feeling that meetings take up too much time (X= 3.67, SD = 2.43).

18. Feeling I have to participate in school activities outside of the normal working hours at the expense of my personal time (X=3.29, SD = 1.68).

10. Imposing excessively high expectations on myself (X = 3.26, SD = 1.34).

A mean over 3.0 indicates that the item's work descriptors do cause the participant some level of stress.

Table 9 presents a frequency table for the ten items that are task-based items. Of the six items that produced the highest means, five of these items are grouped in the task-based part of the ASI and the sixth is a boundary-spanning item. Of the 10 items included in this grouping, the means range from 1.3 to 4.9, with almost 60% of the respondents having a mean above 2.9.

Table 4:

Frequency Distribution of Schools Based on English MCAS Scores

English Scaled Scores	n	%	Cumulative %
200 – 219 Failure	10	7.4%	7.4%
220 – 239 Needs Improvement	94	69.6%	77%
240 – 259 Proficient	31	23%	100%
260 – 280 Advanced	0	0%	0%

Table 5:

Frequency Distribution of Schools Based on MCAS Mathematics Scores

Mathematics Scaled Scores	n	%	Cumulative %
200 – 219 Failure	27	20%	20%
220 – 239 Needs Improvement	95	70.4%	90.4%
240 – 259 Proficient	13	9.6%	100%
260 – 280 Advanced	0	0%	0%

Table 6:

Frequency Distribution of Schools Based on Science MCAS Scores

Science Scaled Scores	n	%	Cumulative %
200 – 219 Failure	11	8.1%	8.1%
220 – 239 Needs Improvement	120	88.9%	97%
240 – 259 Proficient	4	3%	100%
260 – 280 Advanced	0	0%	0%

Table 7:

Frequency Distribution of Schools Based on Total MCAS Scores

Total Scaled Scores	n	%	Cumulative %
200 – 219 Failure	14	10.4%	10.4%
220 – 239 Needs Improvement	111	82.2%	92.6%
240 – 259 Proficient	10	7.4%	100%
260 – 280 Advanced	0	0%	0%

Table 8

Frequencies, Means, and Standard Deviations for the Administrators Stress Index Items

Question	1	2	3	4	5	NA	M	SD
1	23	37	72	21	15	0	2.81	1.10
2	30	58	49	21	11	0	2.56	1.12
3	18	55	64	23	7	12	2.68	0.98
4	86	43	18	8	2	12	1.71	0.95
5	51	54	33	22	7	2	2.28	1.16
6	37	45	43	26	16	1	2.65	1.28
7	39	69	42	10	7	1	2.29	1.08
8	120	22	1	5	0	19	1.31	0.85
9	26	50	49	26	16	1	2.77	1.27
10	21	25	40	55	24	2	3.26	1.34
11	25	42	51	32	8	4	2.77	1.29
12	24	46	51	32	7	2	2.76	1.31
13	52	58	25	13	7	7	2.20	1.41
14	94	36	18	8	3	3	1.76	1.39
15	34	43	36	32	11	6	2.71	1.57
16	65	46	27	15	3	5	2.10	1.55
17	26	56	43	29	7	1	2.69	1.57
18	17	28	48	42	26	1	3.29	1.68
19	35	58	31	27	9	2	2.58	1.75
20	25	67	44	17	6	2	2.56	1.71
21	25	47	51	27	10	1	2.80	1.82
22	42	54	29	22	12	2	2.54	1.97
23	51	61	34	11	4	1	2.23	1.93
24	49	38	17	7	3	49	2.11	2.30
25	35	39	50	28	9	1	2.75	2.11
26	6	20	36	42	64	0	3.95	2.07
27	4	18	31	61	54	0	3.99	2.07
28	25	43	49	28	19	3	2.99	2.31
29	33	72	34	17	8	5	2.52	2.33
30	65	60	24	11	2	5	2.09	2.40
31	10	26	42	48	42	0	3.67	2.43
32	6	21	46	52	43	0	3.79	2.44
33	30	56	49	28	4	1	2.70	2.57
34	38	60	44	18	6	2	2.55	2.67
35	21	62	44	26	12	3	2.86	2.74

Table 9:

Frequency Distribution on Task Based Stress Index Items

Task Based Stress Score	n	%	Cumulative %
1.3	1	.6%	0.6%
1.4	1	0.6%	1.2%
1.6	2	1.2%	2.3%
1.7	2	1.2%	3.5%
1.9	2	1.2%	4.7%
2.0	5	2.9%	7.6%
2.1	6	3.5%	11.1%
2.2	4	2.3%	13.5%
2.3	6	3.5%	17.0%
2.4	6	3.5%	20.5%
2.5	4	2.3%	22.8%
2.6	8	4.7%	27.5%
2.7	7	4.1%	31.6%
2.8	13	7.6%	39.2%
2.9	11	6.4%	45.6%
3.0	13	7.6%	53.2%
3.1	9	5.3%	58.5%
3.2	11	6.4%	64.9%
3.3	8	4.7%	69.6%
3.4	11	6.4%	76.0%
3.5	6	3.5%	79.5%
3.6	13	7.6%	87.1%
3.7	3	1.8%	88.9%
3.8	3	1.8%	90.6%
3.9	4	2.3%	93.0%
4.0	3	1.8%	94.7%
4.1	3	1.8%	96.5%
4.2	1	0.6%	97.1%
4.3	3	1.8%	98.8%
4.8	1	0.6%	99.4%
4.9	1	0.6%	100.0%

Table 10 presents a frequency distribution for boundary-spanning stress. There are five items in this grouping. The means range from 1.2 to 4.8, with only 30% of the means above 3.0.

Table 11 presents the frequency distribution for the three items reflecting conflict mediation. These means range from 1 to 5, with 85% responding with a 3.0 or less. Table 12 presents the frequency distribution for the seven items that indicate role-based stress. The means for these items range from 1 to 4.43, with 80% under 3.0. Table 13 presents a frequency distribution for the total ASI. These means range from 1.4 to 4.4, with 70% of respondents scoring below 3.0.

Table 14 presents the means and standard deviations for all participants for the Administrators Stress Index. In addition to all participants, a breakdown of means and standard deviations is given for sex, age (above and below the median of 53), years of experience (above and below the median of 8 years), and total school enrollment (500 or less, 501-1000, 1001-1500, and 1501 +). Means and standard deviations are given by total MCAS scores (600-659, 660-719, and 720+) for those participants who are involved in this part of the research.

Table 15 presents the Pearson correlations for the sub-scales of the Administrators Stress Index (task, boundary-spanning, conflict mediating, and role). The correlations range from .29 for conflict and role sub-scales to .84 for the task sub-scale with the total scale. All correlations are positive and significant.

Table10:

Frequency Distribution on Boundary Spanning Index Items

Boundary Spanning Stress Score	n	%	Cumulative %
1.2	1	0.6%	0.6%
1.4	4	2.3%	2.9%
1.6	6	3.5%	6.4%
1.8	6	3.5%	9.9%
2	8	4.7%	14.6%
2.2	8	4.7%	19.3%
2.4	18	10.5%	29.8%
2.6	26	15.2%	45.0%
2.8	27	15.8%	60.8%
3	22	12.9%	73.7%
3.2	8	4.7%	78.4%
3.4	14	8.2%	86.5%
3.6	8	4.7%	91.2%
3.8	6	3.5%	94.7%
4	3	1.8%	96.5%
4.4	4	2.3%	98.8%
4.8	2	1.2%	100.0%

Table 11:

Frequency Distribution on Conflict Mediating Stress Index Items

Conflict Mediating Stress Score	n	%	Cumulative %
1	16	9.4%	9.4%
1.34	17	9.9%	19.3%
1.67	20	11.7%	31.0%
2	34	19.9%	50.9%
2.34	21	12.3%	63.2%
2.67	19	11.1%	74.3%
3	23	13.5%	87.7%
3.34	8	4.7%	92.4%
3.67	6	3.5%	95.9%
4	3	1.8%	97.7%
4.67	1	0.6%	98.2%
5	3	1.8%	100.0%

Table 12:

Frequency Distribution on Role Based Stress Index Items

Role Based Stress Score	n	%	Cumulative %
1	9	5.3%	5.3%
1.15	2	1.2%	6.4%
1.29	12	7.0%	13.5%
1.4	1	0.6%	14.0%
1.43	5	2.9%	17.0%
1.58	8	4.7%	21.6%
1.6	1	0.6%	22.2%
1.67	1	0.6%	22.8%
1.72	12	7.0%	29.8%
1.84	1	0.6%	30.4%
1.86	11	6.4%	36.8%
2	12	7.0%	43.9%
2.15	10	5.8%	49.7%
2.17	3	1.8%	51.5%
2.29	10	5.8%	57.3%
2.34	1	0.6%	57.9%
2.38	1	0.6%	58.5%
2.43	15	8.8%	67.3%
2.5	1	0.6%	67.8%
2.58	5	2.9%	70.8%
2.6	1	0.6%	71.3%
2.72	10	5.8%	77.2%
2.75	1	0.6%	77.8%
2.86	3	1.8%	79.5%
3	4	2.3%	81.9%
3.08	1	0.6%	82.5%
3.15	6	3.5%	86.0%
3.17	1	0.6%	86.5%
3.25	1	0.6%	87.1%
3.29	3	1.8%	88.9%
3.43	4	2.3%	91.2%
3.5	2	1.2%	92.4%
3.58	1	0.6%	93.0%
3.72	3	1.8%	94.7%
3.86	1	0.6%	95.3%
4	3	1.8%	97.1%
4.15	1	0.6%	97.7%
4.29	3	1.8%	99.4%
4.43	1	0.6%	100%

Table 13:

Frequency Distribution on Total Stress Index Items

Total Stress Score	n	%	Cumulative %
1.4	2	1.2%	1.2%
1.5	1	0.6%	1.8%
1.6	1	0.6%	2.3%
1.7	3	1.8%	4.1%
1.8	7	4.1%	8.2%
1.9	5	2.9%	11.1%
2.0	6	3.5%	14.6%
2.1	7	4.1%	18.7%
2.2	10	5.8%	24.6%
2.3	6	3.5%	28.1%
2.4	8	4.7%	32.7%
2.5	9	5.3%	38.0%
2.6	17	9.9%	48.0%
2.7	15	8.8%	56.7%
2.8	18	10.5%	67.3%
2.9	6	3.5%	70.8%
3.0	16	9.4%	80.1%
3.1	9	5.3%	85.4%
3.2	6	3.5%	88.9%
3.3	6	3.5%	92.4%
3.4	5	2.9%	95.3%
3.5	2	1.2%	96.5%
3.6	1	0.6%	97.1%
3.7	1	0.6%	97.7%
3.8	2	1.2%	98.8%
4.0	1	0.6%	99.4%
4.4	1	0.6%	100.0%

Table 14:

Means and Standard Deviations on ASI Scales

Variable	Task		Boundary		Conflict		Role		Total	
	M	SD	M	SD	M	SD	M	SD	M	SD
All Participants	3.00	.65	2.77	.68	2.27	.85	2.28	.8	2.59	.52
Gender										
Female	3.01	.51	2.78	.70	2.11	.87	2.21	.69	2.58	.43
Male	3.00	.68	2.76	.67	2.31	.85	2.29	.83	2.59	.55
Age										
Below Median	3.03	.73	2.72	.68	2.23	.93	2.22	.84	2.58	.57
Above Median	2.99	.54	2.86	.69	2.31	.76	2.31	.74	2.62	.47
Years Exp.										
Below Median	3.07	.66	2.84	.68	2.32	.99	2.25	.78	2.64	.52
Above Median	2.95	.6	2.75	.65	2.26	.68	2.33	.82	2.57	.51
Enrollment										
< 500	2.94	.42	2.70	.53	2.11	.79	2.27	.81	2.54	.41
501-1000	2.95	.70	2.87	.71	2.42	.91	2.27	.82	2.62	.57
1001-1500	3.07	.55	2.77	.71	2.42	.71	2.4	.79	2.57	.52
1501+	3.09	.55	2.77	.71	2.42	.71	2.4	.79	2.66	.54
MCAS										
600-659	2.86	.90	2.57	.93	2.17	.93	2.48	1.02	2.55	.72
660-719	3.01	.65	2.78	.66	2.33	.87	2.25	.80	2.61	.55
720+	3.14	.48	2.97	.54	2.22	.60	2.21	.47	2.65	.26

Table 15:

Pearson Correlation Coefficients between ASI scales

	Task	Boundary	Conflict	Role	Total
Task	1.0	.51	.41	.44	.84
Boundary		1.0	.31	.41	.51
Conflict			1.0	.29	.41
Role				1.0	.75
Total					1.0

Analysis of Hypotheses

Hypothesis 1: There are no significant differences between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of student performance on the MCAS Assessments given in the spring of 1999 to tenth grade students. A one-way analysis of variance was used to compare the significance of self-reported stress and the independent variable of school performance on the 1999 MCAS assessments in English, mathematics, and science. The means on the ASI as a total instrument and as scaled scores in terms of task, boundary, conflict, and role stress were compared. The ANOVA results are reported in Tables 16, 17, 18, and 19. There were no statistically significant findings in this analysis of variance. Therefore, this hypothesis is upheld.

Hypothesis Two: There are no significant differences between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of the size of the school. A one-way analysis of variance was run on the variable of school enrollment which is presented in Table 20. There were no statistically significant differences found and this hypothesis is upheld.

Hypothesis Three: No significant relationship exists between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of the age of the principal. A Pearson correlation was run on the four scales of the ASI and the total ASI for both age and years of experience. No significant correlations were found. These results are presented in Table 21. This hypothesis is upheld.

Hypothesis Four: No significant relationship exists between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress between high school principals and the independent variable of the experience of the principal. The Pearson correlation is presented in Table 21. No significant correlations were found and this hypothesis is upheld.

Hypothesis Five: There are no significant differences between the variables of reported levels of task-based, role-based, conflict-mediating, and boundary-spanning stress among high school principals and the independent variable of the sex of the principal. An independent sample T-Test was run for this hypothesis. Results are found in Table 22. The mean differences were not statistically significant. The T-values were -0.275 for task, 0.853 for boundary-spanning, -1.073 for conflict-mediating, -1.045 for role, and –0.292 for the total ASI. This hypothesis is also upheld.

Table16:

Analysis of Variance Results by MCAS English Scaled Scores on ASI Scales

Scales		Sum of Squares	Mean Sum of Squares	F Ratio	Sig. Level
Role					
	Between	1.444	.722	1.617	.203
	Within	58.042	.446		
Boundary					
	Between	.088	.044	.092	.912
	Within	62.547	.481		
Conflict					
	Between	.774	.387	.527	.591
	Within	95.403	.734		
Task					
	Between	1.405	.703	1.078	.343
	Within	84.753	.652		
Total					
	Between	.738	.369	1.211	.301
	Within	39.609	.305		

Table 17:

Analysis of Variance Results by MCAS Mathematics Scaled Scores on ASI Scales

Scales		Sum of Squares	Mean Sum of Squares	F Ratio	Sig. Level
Role					
	Between	1.383	.692	1.547	.217
	Within	58.103	.447		
Boundary					
	Between	1.542	.771	1.641	.198
	Within	61.094	.47		
Conflict					
	Between	.689	.344	.469	.627
	Within	95.488	.735		
Task					
	Between	1.592	.796	1.224	.298
	Within	84.566	.651		
Total					
	Between	1.125	.563	1.865	.159
	Within	39.222	.302		

dealt with more effectively if the principalship is to continue to be a career objective for educators.

Of the five boundary-spanning items, only one was less than 2.5 and that item, "being involved in collective bargaining" was an NA item for 29% of the respondents. Again issues of dealing with contracts, community support, and regulations are stressful at least some of the time for principals. With the information from this research as a foundation, the following are recommended:

1. Public school systems need to find avenues to deal with the task and boundary items of the principalship more effectively. An analysis of the daily and weekly tasks of the high school principal should be undertaken with the intent of moving the tasks to a different level of administration. This research and the review of literature completed for this research did not indicate that the daily work of students and teachers were pressing on the principalship, but rather the endless tasks of regulations and compliance with regulations. Stress created by these tasks was virtually the same for all principals regardless of how demographics grouped the respondents.

2. With the median age of high school principals in Massachusetts at 53, the next three to five years will find vacancies in almost half of the high schools in the state. A new retirement bill will allow almost all of the principals currently over 53 to retire with full benefits in that time period. To fill these anticipated vacancies with capable candidates, a system of mentoring prospective principals needs to be in place as soon as possible. Colleges of Education need to work with school systems to develop a pool of candidates who would be attractive to systems in a given geographical area. Most high schools in Massachusetts are the only high school within their community. Rather than

limiting a serious search to candidates within that community, moving from system to system must become commonplace if vacancies are going to be filled with competent, yet inexperienced, candidates. The use of the internet to foster ease of application would be helpful.

3. The results of the state MCAS tests did not have a statistically significant impact on the reported stress level of principals. It should be noted, however, that these tests carry with them a significant amount of task-based responsibilities. Since task and boundary are the key areas of stress for principals, further research might show that the details of the MCAS have had an impact that the scores, whether they are high or low, did not. This research was focused on the possibility of significant differences being associated with MCAS result. There was no attempt to look at what the implications of the work of the MCAS tests had on the life of the principal. That would be the work of further research.

4. Although no statistically significant results were found in terms of gender and stress, further research that included pairing of samples might be illuminating. This research was overwhelmingly male-dominated as is the landscape of the high school principal's position in Massachusetts. A qualitative study pairing genders might find interesting differences in dealing with the task-based and boundary-spanning stress items.

Conclusion

While stress exists in the lives of the majority of the principals represented in this research, this research did not pinpoint significant differences in demographics that account for the reported stress. It seems important, therefore, to accept the fact that the

principalship is inherently a stressful position. It is important to reassign tasks, wherever possible, to other employees in new and creative ways. It is a stressful position, according to this research, because of the management tasks involved, rather than because of the day-to-day dealing with students. Reassigning certain tasks would be the start of helping to continue to make the principalship an attractive career move.

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Appendix A

Letter of Request

Thomas Ryan

From: Gmelch, Walter <wgmelch@iastate.edu>
To: 'Thomas Ryan' <ryan@stoneham.mec.edu>
Sent: Monday, April 03, 2000 8:00 AM
Subject: RE: Request

Dear Tom:
You are hereby granted permission to use the ASI. I ask that you share a copy of the results so I may keep track of how the instrument is being used.
Best wishes with your research.
Walt Gmelch

****

Walter H. Gmelch, Dean
College of Education
Iowa State University
E262 Lagomarcino Hall
Ames, IA 50011-3190
Phone: (515) 294-7000
Fax: (515) 294-9725
E-Mail: wgmelch@iastate.edu

-----Original Message-----
From: Thomas Ryan [mailto:ryan@stoneham.mec.edu]
Sent: Monday, April 03, 2000 6:55 AM
To: wgmelch@iastate.edu
Subject: Request

Dear Dr. Gmelch:
I am a graduate student at Seton Hall University in their Executive Ed.D. program. I am also a high school principal in Massachusetts. For my dissertation, I am planning on studying the impact, if any, of our new state mandated standards tests on the stress level of principals. I would like to use your ASI for my study. Of course, I would share my research with you or whomever as requested for permission to use the ASI. Thank you.
Tom Ryan

Appendix B

Letter to Participants

September 2000

«LastName»
«Title»
«Address1»
«City», «State»

Dear «Greeting»:

I am a doctoral student at Seton Hall University in the Executive EdD. Program. I am studying "The relationship of self-reported stress level of Massachusetts secondary principals to their schools scores on the 1999 MCAS tests."

In order for my research to be successful, I am asking your assistance. The purpose of this research is to study whether a relationship exists between secondary principals in the Commonwealth of Massachusetts self-reported stress levels and their schools aggregate scores on the 1999 MCAS tests in English, mathematics, and science. I am asking you to complete the enclosed biographical data sheet and the thirty-five-item Administrative Stress Index (ASI), a preceptionnaire that describes situations that may be stressful to administrators. You will rate these situations from "not applicable" to "frequently bothers me." Completion of the data sheet and the ASI will take about fifteen minutes. Please return completed materials in the enclosed, pre-coded envelope. Envelopes are coded to allow me to follow-up non-respondents. Materials will be separated from the envelopes to maintain your confidentiality. Completing these documents will take about 15 minutes.

Your participation in this study is strictly voluntary and would be greatly appreciated. Your anonymity, as well as the confidentiality of your responses is guaranteed. Your completion and return of the instruments indicates your understanding of this project and your willingness to participate.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Subjects Research. The IRB believes that the research procedures adequately safeguard the subject's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is (973) 275-2975.

I am very grateful for your support in this endeavor. Aggregate data will be available upon completion of the study. Please return the enclosed form to indicate your interest in receiving a copy of the aggregate data.

Sincerely,

Thomas F. Ryan, Jr.

Appendix C

Administrative Stress Index

Administrative Stress Index

(PLEASE CIRCLE YOUR RESPONSE)

School administrators have identified the following 35 work-related situations as sources of concern. It's possible that some of these situations bother you more than others. How much are you bothered by each of the situations listed below?

	Not App.	Rarely or Never bothers me		Occasionally bothers me		Frequently bothers me	
1. Being interrupted frequently by telephone calls	NA	1		2	3	4	5
2. Supervising and coordinating the tasks of many people	NA	1		2	3	4	5
3. Feeling staff members don't understand my goals and expectations	NA	1		2	3	4	5
4. Feeling that I am not fully qualified to handle my job	NA	1		2	3	4	5
5. Knowing I can't get information needed to carry out my job properly	NA	1		2	3	4	5
6. Thinking that I will not be able to satisfy the conflicting demands of those who have authority over me.	NA	1		2	3	4	5
7. Trying to resolve differences between/among students	NA	1		2	3	4	5
8. Feeling not enough is expected of me by my superiors	NA	1		2	3	4	5
9. Having my work frequently interrupted by staff members who want to talk.	NA	1		2	3	4	5
10. Imposing excessively high expectations on myself	NA	1		2	3	4	5

(OVER)

11. Feeling pressure for better job performance over and above what I think is reasonable	NA	1	2	3	4	5
12. Writing memos, letters and other communications	NA	1	2	3	4	5
13. Trying to resolve differences with my superiors	NA	1	2	3	4	5
14. Speaking in front of groups	NA	1	2	3	4	5
15. Attempting to meet social expectations (housing, clubs, friends, etc.)	NA	1	2	3	4	5
16. Not knowing what my supervisor thinks of me or how he/she evaluates my performance	NA	1	2	3	4	5
17. Having to make decisions that affect the lives of individual people that I know (colleagues, staff members, students, etc.)	NA	1	2	3	4	5
18. Feeling I have to participate in school activities outside of the normal working hours at the expense of my personal time.	NA	1	2	3	4	5
19. Feeling I have too much responsibility delegated to me by my supervisor.	NA	1	2	3	4	5
20. Trying to resolve parent/student conflicts	NA	1	2	3	4	5
21. Preparing and allocating budget resources	NA	1	2	3	4	5
22. Feeling that I have too little authority to carry out responsibilities assigned to me	NA	1	2	3	4	5
23. Handling student discipline problems	NA	1	2	3	4	5
24. Being involved in the collective bargaining process	NA	1	2	3	4	5
25. Evaluating staff members' performances	NA	1	2	3	4	5

26. Feeling that I have too heavy a work load that I cannot possibly finish during the normal workday	NA	1	2	3	4	5
27. Complying with state, federal, and organizational rules and policies	NA	1	2	3	4	5
28. Feeling that the progress on my job is not what it should or could be	NA	1	2	3	4	5
29. Administering the negotiated contract (grievances, interpretation, etc.)	NA	1	2	3	4	5
30. Being unclear on just what the scope and responsibilities of my job are	NA	1	2	3	4	5
31. Feeling that meetings take up too much time	NA	1	2	3	4	5
32. Trying to complete reports and other paper work on time	NA	1	2	3	4	5
33. Trying to resolve differences between/among staff members	NA	1	2	3	4	5
34. Trying to influence my immediate supervisors actions and decisions that affect me	NA	1	2	3	4	5
35. Trying to gain public approval and/or financial support for school programs	NA	1	2	3	4	5
36. Other situations about your job that bother you	NA	1	2	3	4	5

Appendix D

Biographical Data Sheet

BIOGRAPHICAL DATA SHEET

1. Gender _____Male _____Female

2. Age _____

3. Total years of secondary school principal experience: _____

4. Total school enrollment: _____

5. 1999 Grade 10 MCAS results as averaged scaled scores

English _____ Mathematics _____ Science _____